

AMENDMENTS TO THE CLAIMS

Claims 1-10 (Cancelled).

11. (Currently Amended) A method of calibrating an ophthalmic lens drilling machine, the drilling machine including a drilling tool, an ophthalmic lens support associated with a first coordinate system, and a programmable guidance unit for guiding the tool, the programmable guidance unit being associated with a second coordinate system expressing command coordinates which define a target drilling point; said method comprising:

placing a template on the lens support, the template having pre-applied markings defining a third coordinate system related to the template, said placing being conducted such that the third coordinate system substantially coincides with the first coordinate system;

drilling the template in at least one pre-determined point corresponding to the target drilling point defined by predetermined command coordinates so as to create a drilled template, said drilling being performed such that a real drilling point is obtained;

creating an image of the drilled template;

analyzing the created image using an image analysis unit to measure an offset between the position of the real drilling point and the position of the target drilling point; and

introducing a correction of the command coordinates using the guidance unit so as to introduce a correction of the command coordinates capable of compensating for the offset;

wherein said drilling comprises drilling the template at two predetermined points, each predetermined point corresponding to a target point defined by predetermined command coordinates, so as to obtain two real drilling points, said introducing a correction comprising determining a correction based on a mean value of the offsets of the positions of the two real drilling points with respect to the respective two target points.

12. (Previously Presented) The method of claim 11, wherein the markings defining the third coordinate system comprise markings which define a centre and markings which define two orthogonal axes.

Claim 13 (Cancelled).

14. (Currently Amended) A drilling calibration device for calibrating an ophthalmic lens drilling machine by a method in which a template is placed on a lens support, the template having pre-applied markings; the template being drilled in at least one pre-determined point corresponding to the target drilling point defined by predetermined command coordinates so as to create a drilled template, the drilling being performed such that a real drilling point is obtained; an image of the drilled template being created; the created image being analyzed to measure an offset between the position of the real drilling point and the position of the target drilling point; and a correction of the command coordinates being introduced using a guidance unit so as to introduce a correction of the command coordinates capable of compensating for the offset, said drilling calibration device comprising:

an image capture device to create the image of the drilled template;

an image analysis unit connected to said image capture device, said image analysis unit being operable to detect a position of the image of the real drilling point of the template, in a coordinate system defined by the markings appearing on the template, and to calculate the offset of the position of the image with respect to the target drilling point defined by the predetermined command coordinates and produce an offset information element; and

a programming unit connected to said image analysis unit and to a guidance unit for guiding an ophthalmic lens drilling machine, said programming unit being operable to receive the offset information element from said image analysis unit, and to program the guidance unit of the drilling machine based on the offset information element so as to introduce a correction of the command coordinates as a function of the offset information element;

wherein said programming unit is further operable to determine a correction based on a mean value of offsets of positions of two real drilling points with respect to two respective target points, the template being drilled at two predetermined points, each predetermined point corresponding to a respective one of the two target points defined by predetermined command coordinates, so as to obtain the two real drilling points.

15. (Previously Presented) The device of claim 14, further comprising a screen and an illumination device for illuminating an ophthalmic object so as to enable a shadow of the template to be projected on to the screen, said screen being placed in a field of observation of said image capture device.

16. (Previously Presented) The device of claim 15, further comprising a transparent support to receive and support the template, said transparent support being positioned between illumination device and said screen.

17. (Previously Presented) The device of claim 16, further comprising a collimator positioned between said illumination device and said transparent support to make light rays emitted by said illumination device substantially parallel to each other and normal with respect to said transparent support.

18. (Previously Presented) The device of claim 15, wherein said screen is a ground glass.

19. (Previously Presented) The device of claim 14, wherein said image capture device is a video camera.

Claim 20 (Cancelled).

21. (Currently Amended) A drilling system for machining ophthalmic lenses, comprising:
a drilling machine including:
 a drilling tool;
 an ophthalmic lens support associated with a first coordinate system; and
 a programmable guidance unit for guiding said drilling tool, said guidance unit being associated with a second coordinate system expressing command coordinates which define a target drilling point; and

a drilling calibration device including:

an image capture device to create an image of a drilled template having pre-applied markings defining a third coordinate system and having a real drilling point, the third coordinate system substantially coinciding with the first coordinate system;

an image analysis unit connected to said image capture device, said image analysis unit being operable to detect a position of the image of the real drilling point of the template in the third coordinate system defined by the markings appearing on the template, and to calculate the offset of the position of the image with respect to the target drilling point defined by the predetermined command coordinates and produce an offset information element; and

a programming unit connected to said image analysis unit and to a guidance unit for guiding an ophthalmic lens drilling machine, said programming unit being operable to receive the offset information element from said image analysis unit, and to program said guidance unit of said drilling machine based on the offset information element so as to introduce a correction of the command coordinates as a function of the offset information element;

wherein said programming unit is further operable to determine a correction based on a mean value of offsets of positions of two real drilling points with respect to two respective target points, the template being drilled at two predetermined points, each predetermined point corresponding to a respective one of the two target points defined by predetermined command coordinates, so as to obtain the two real drilling points.

Claim 22 (Cancelled).